STATUS REPORT ON
THE DEPARTMENT'S REVIEW OF THE PROPOSED
CRANDON MINING COMPANY MINE: April 1995

Department of Natural Resources
Box 7921, Madison, WI 53707
April 1995

Introduction: During the past year and one-half, the Crandon Mining Company has been developing its project plans and collecting data from the study area for its proposed underground, zinc and copper mine in Forest County. Now, as the company compiles its environmental data and permit applications to submit to the Department, our emphasis will focus on a comprehensive review of the permit applications and preparation of our environmental impact statement.

In February 1994, the company submitted its Notification of Intent to the Department, which officially served to notify us and the citizens of Wisconsin that it intended to seek a mining permit for the Crandon orebody. In April 1994, we held an informational hearing on the company's preliminary project proposal and plan of study and heard the comments of tribal representatives, agency members and the general public. Since that time, the company has been conducting tests, gathering environmental data from the study area and region, and developing its permit applications.

During this same period, Department staff have been conducting verification oversight on all aspects of the company's data gathering activities in the field as well as verifying the capability and methods of analysis of its contractors' laboratories. In May 1995, the company plans to begin submitting its environmental data gathered from the project site and vicinity together with study results and project plans. The document containing this information is called the environmental impact report (EIR), and is required of most applicants seeking state permits for a complex project. The EIR will be available for public review at Department offices and in local libraries, and also will be provided to the tribes, other agencies and local municipalities.

Schedule for Submitting Environmental Impact Report and Permit Applications: The Crandon Mining Company released its schedule identifying when its EIR and other documents would be available for Department and public review. The EIR submittal will mark the beginning of the Department's more comprehensive review of the project and preparation of our draft environmental impact statement (EIS). The schedule is as follows:

Early May	Environmental and Socioeconomic Data Mining Permit Application (without surface water mitigation section) Tailings Management Engineering Report
May	Air Quality Permit Application Federal 404 Permit Application Wastewater Treatment Engineering Report

	WPDES (surface water discharge) Permit Application
June	Stream Crossings Permit Applications
July	High Capacity Well Plan Remainder of Environmental Data and Study Results Mining Permit Application (with surface water mitigation) Groundwater Modeling Results

Project Review Schedule: It will require about one and one-half years for the Department to complete its review of the project proposal and prepare the draft EIS. We have developed the following hypothetical schedule for the Department's environmental impact analysis and permit review process. The process may be faster or slower than this schedule shows depending on the agencies involved, technical problems which may arise, changes in the law and other issues.

May to July 1995	Crandon Mining Company (CMC) begins to submit the EIR and permit applications to DNR; DNR begins review of all documents; technical meetings with company continue on subject areas which have not been given a full preliminary review by DNR. Formal review comments on its EIR and permit applications are sent to Crandon Mining Company. _____ Close to the release time for the draft environmental impact statement, DNR develops its proposal for compliance boundaries and groundwater standards for the proposed mining site. CMC revises and resubmits EIR and permit applications if necessary.
1996 (second half)	DNR releases draft environmental impact statement, notices public informational hearing to be held in 30-60 days.
1996 (second half)	Public informational hearing on draft environmental impact statement in Crandon area. CMC revises EIR if necessary.
1997 (first half)	DNR releases final environmental impact statement (FEIS) on proposal. Preparation for the master hearing intensifies, and includes production of written testimony and draft permits with permit conditions.
120-180 days after FEIS	Contested case hearing (Master Hearing) - on permit applications, approvals and adequacy of FEIS - begins in project area, continues

	later in Madison area.
1997 (second half)	Hearing ends, briefing period by parties begins.
1997 (second half or early 1998)	Decision-maker releases written decision on permits and impact statement adequacy.

Federal Environmental Impact Statement: Late in 1994 the U.S. Army Corps of Engineers determined that it would prepare a federal environmental impact statement before making its permit decision on the project, and early in 1995 held public issue identification (scoping) meetings in Madison and Crandon. The Corps and Department continue to discuss how we could prepare a joint environmental impact statement.

Public Service Commission: The Public Service Commission will be cooperating with the Department in preparing the joint environmental impact statement. The Commission regulates utilities, and has approval authority over the electric powerline and natural gas pipeline that would be needed by the proposed facility. The project lies within the service area of the Wisconsin Public Service Corporation, which has outlined alternative electric line routes and held a public meeting in the project area for land owners along the alternative corridors. In March, the utility filed its electric transmission line application with the PSC.

Consultant Services: The Department has hired four consultants to assist in the review of the company's groundwater modeling effort. Two are from the United States Geological Survey, one from the Wisconsin Geological & Natural History Survey and one an independent (short-term) consultant. In addition, the Department plans to hire one additional consultant to review the tailings disposal plans.

Progress in Reviewing the Mining Proposal:

Groundwater Modeling - One purpose of groundwater modeling is to estimate groundwater inflow into the underground mine, and based on that figure, to evaluate the extent of the resultant groundwater drawdown. The groundwater drawdown would be caused by continuous pumping to keep the mine from flooding. Knowing the extent of the groundwater drawdown, we can evaluate the probable impacts on nearby lakes, streams and wetlands. Groundwater modeling also will be used to project impacts of the surface water mitigation plan (designed to replenish lakes and streams with water), if one is needed. In addition, groundwater modeling will form the basis for evaluating impacts to the area groundwater system from the reclaimed mine and the waste disposal area.

The company, Department and its consultants along with other consultants attend regular review meetings on the development of the groundwater model. When the company has completed development of its model, the Department will obtain the model software and data set and perform checks and analyses of the modeling effort. This will serve as another method to verify such aspects as inputs, calibration, sensitivity analyses, boundary conditions and other characteristics that could significantly affect the usefulness of the model's predictions.

The groundwater model is only a predictive tool, and we will require detailed environmental monitoring, including monitoring of the groundwater level and surface water levels, should the project ultimately be approved. Permit conditions would require rerunning the model over regular intervals using the monitoring results as input data. In this manner, the actual impacts beginning to be expressed in the project area early in the project development could be compared to the predicted impacts in order to check the accuracy of the predictions. In addition, more reliable full impact predictions could be made at that time based on a partial expression of impacts.

Groundwater Drawdown - One of the impacts from the proposed project would be a drawing down of the groundwater level around the mine site, assuming the proposal is permitted. We do not know the extent of the drawdown and the resultant impacts to water wells, lakes and streams because we have not completed our analyses. However, we do know that the drawdown will take several years to develop, affording ample time to monitor its extent. The environmental impact statement will contain these analyses.

In advance of knowing our predictions and consequences of the drawdown, it may be helpful to describe how the laws and rules address these issues. If the drawdown would result in reducing the amount of water reaching nearby lakes and streams, such as Little Sand Lake and Swamp Creek, we would first determine how much less water would be available, then evaluate its impacts. We could not approve of a project that would result in an injury to public rights in those waters. In other words, if fish or wildlife habitat were reduced, if the ability to navigate would be altered, or if wild rice in nearby Rice Lake were expected to be affected, for example, we could not approve of the proposal. If we believed that there would be a significant reduction in the amount of water reaching lakes and streams, we would require the company to prepare an acceptable means to replace that lost water.

The predictions of the groundwater drawdown would allow the company to take any necessary actions to protect nearby water wells potentially affected by the project. Wells could be cased, deepened, or new pumps added, for example, so that they could continue to provide an adequate quantity and quality of water during the mining project. Preventive measures to nearby water wells would be addressed in a local agreement with the municipality.

Tailings Disposal - The Department has discussed conceptual plans with the company for a tailings disposal facility that would be very similar in design to a modern engineered landfill. It would have double liners and an underdrain, to reduce leakage during operations, and a relatively impermeable reclamation cap to prevent water infiltration following reclamation. The company is exploring various measures to prevent acidification of the mining wastes over the long term.

The Department will be evaluating the long-term impacts of leakage from the tailings disposal area on the local groundwater system. Our analysis must show that the environmental safeguards put in place would prevent acidification of the wastes and prevent excessive leakage from the facility, or we could not approve its construction. The facility could not be approved if a reasonable analysis indicated that the groundwater standards (safe drinking water) would be violated.

Wastewater Discharge - The company completed its preliminary review of several alternative methods of disposing treated wastewater and selected the Wisconsin River as its preferred alternative. A 37 mile buried pipeline from the project site to the river just south of Rhinelander is under evaluation. Other alternatives considered by the company were seepage lagoons on the project site and a surface water discharge to the Wolf River system.

The Department has provided the company with preliminary surface water effluent limitations and groundwater limitations for the alternatives. For the Wisconsin River system, the effluent limitations would be set to protect the most sensitive aquatic organisms in the river as well as the existing uses of the river. The effluent limitations include calculations for toxic materials that have the potential to accumulate in river organisms.

Verification of Environmental Impact Report Data - The Department staff continues to evaluate and verify activities of the company and its consultants during its data gathering. We monitor the data collection for baseline air quality, aquatic and terrestrial biology, groundwater quality, socioeconomics, surface water, waste characterization and wetland delineation. In addition, Department staff evaluates the laboratories used by the company to be certain those labs are certified to perform the analyses and that the methods utilized are appropriate. Together this information will form the basis for the company's environmental impact report.

Endangered Species - One of the important resource issues revealed during the baseline data gathering was the discovery of several endangered and threatened plant species during the company's exhaustive search of the project area. The threatened algal-leaved pondweed, thought to have been extirpated from Duck Lake, was relocated there with the use of SCUBA gear. The Goblin Fern, endangered in Wisconsin, is the only "critical" species discovered that occurs within the proposed development area. Botanists located fourteen new populations of Goblin Fern during 1994. The Department staff and company plan additional work during 1995 to further evaluate the status of Goblin Fern in the project area and region.

Waste Characterization - Department staff has overseen a variety of waste characterization tests. For example, samples of waste rock, ore and tailings were used to synthesize contaminated waste water and leachate. Waste rock and tailings were evaluated to see if they would become acidic in the presence of water and oxygen. Cement was added to tailings for structural stability tests. Additional studies were performed on the permeability and density of tailings, on consolidation, dewatering and drainage potential. Waste characterization tests provide the basic information on the wastes that would be generated by the project and dictate the measures that must be implemented to protect the natural resources in the project area.

Wetland Mitigation - There will be wetland habitat loss if the project were developed as proposed, although the Crandon Mining Company has modified facility size and placement to minimize wetland loss and disturbance. The U.S. Army Corps of Engineers will require the Crandon Mining Company to implement wetland compensatory mitigation measures. In its preliminary search for an acceptable wetland mitigation project site, the company has located a potential site about 50 miles south of the Crandon area: a muck farm in Shawano County. The company and Corps have started discussions on the acceptability of the site for wetland restoration.

MEETING PURPOSES

* Alert you to EIR and permit documents from CMC

* Update on project proposal

* Review our internal procedures and coordination

* Discuss what to expect at the Master Hearing

* Resource problems, issues, questions and potential pitfalls

PROJECT SCHEDULE

May-July 95	CMC submits EIR and Permit Applications
	DNR sends review comments to CMC
	Begin writing our Draft EIS
	CMC revises and resubmits EIR and permit applications if necessary.
1996 (2nd half)	DNR releases draft environmental impact statement
1996 (2nd half)	Public informational hearing on draft EIS
1997 (1st half)	DNR releases final EIS
	Preparation for the master hearing intensifies, and includes production of written testimony and draft permits with permit conditions.
120-180	Master Hearing on permit applications, approvals and after FEIS adequacy of FEIS
1997 (2nd half)	Hearing ends, briefing period by parties begins
1997 (2nd half)	Decision-maker releases written decision on permits and impact statement adequacy

COORDINATING EIR REVIEW

Regulatory Functions - CO	Resource Management - NCD
Air Quality Permit	Forestry
Mining Waste	Wildlife
Mining Permit, Reclamation	Fisheries
Monitoring Plan	Corridors
Wastewater Plan Review	Aquatic Biology
WPDES	Floodplain
High Capacity Well Plan	Solid Waste
Wetlands	
Legal	
Groundwater	
Public Information/Press	
Lab Certification	
Socioeconomics	
Coordination/records	Coordination/records
Endangered Resources	Endangered Resources
Verification	Verification
Surface Water Impacts	Surface Water Impacts

EIS Writing/Reviewing

Air Quality Impacts
Aesthetics
Groundwater Impacts
Public Rights in Surface Waters
Wildlife & Fish Impacts
Surface Water Impacts
Surface Water Mitigation Plan
Risk Analysis
Tailings Management Area
Alternatives